VibAssist™
Vibration Analysis and Diagnostic Software for Rotating Machinery
VibAssist™ is a machinery analysis and diagnostic software specially designed for rotating machinery like turbines, compressors, fans, blowers, motors and pumps. It precisely keeps track of and quickly gives feedback on the condition of rotating machinery, which are the key production assets of plants.

VibAssist™ is a powerful and accurate analysis tool to focus on a key problems of variety of rotating machines and helps customers improve productivity and reliability by optimizing plant operation.

VibAssist™ software detects abnormal symptoms from vibration characteristics or subtle changes in vibration reducing risks of unplanned production shutdown by taking proactive approach.

Analysis View Software

Database Management
User Management
Configuration View
Machine / Maintenance History
Web View
Data Security
Reports
Mobile App
SMS / Emails
Alarm management

Features

High speed data acquisition during startup/shutdown and steady state
Wide range of analysis and display function (machine trains, trend graph, spectrum, shaft center line position, bode/polar plot, orbit display, vector plot, alarm status, etc.)
Browser based GUI with web connectivity
Real time display of various parameters
High resolution spectrum analysis
Rule based diagnostics
Database connectivity with MSSQL and PostgreSQL
Ethernet connectivity via MODBUS for process data
Mimic train of machinery system with online values
Alarm module with indications of any abnormal condition and instantaneous data saving for future analysis
Auto and manual back-up of data which can be viewed later at any time
Export vibration data including waveform and spectrum, in CSV format if user requires further analysis
Customisable reports
Specifications (for Analyser Rack)

Accepts inputs from any type of sensor – displacement / velocity / acceleration / process transmitter (4-20mA input)

Number of phase marker modules / rack
PM module – 04 pulse + 04 mA input channels

Maximum vibration/process modules / rack
DAV modules – 04 vibration + 02 mA channels each

24 channels vibration + 08(pulse + mA) phase marker + 12 nos. of 4-20 mA scalable up to 900 channels by multiple racks (max. 25 racks)

Number of spectrum lines - 1600

Maximum sampling rate 51.2 Ks/second

Waveform storage interval 0/30/60 minutes
(user selectable)

Communication – TCP/Ethernet – 1 No

Display Graph Examples

Machine train diagram
Current value summary
Trend graph : Overall, GAP, 0.5X amp./phase, 1X amp./phase, 2X amp./phase,Not-1X amp., and RPM
Bar graph : Overall, 0.5X, 1X, 2X, Not-1X
Waveform/spectrum

Lissajous (Orbit), Lissajous and Waveform, Vector plot
Shaft centerline (SC)
S-V graph, X-Y graph. Transient graphs (bode, trend, long term trend, waveform/spectrum, SC, polar)
Trend during alarm, system history, alarm history

Examples of Data Displays

Spectrum
Dashboard
Trend, Shaft Centerline
Trend, Waveform, Spectrum and Vector Plot
Lissajous and Waveform
Waterfall
VibAssist™ Diagnosis Software

The VibAssist™ diagnosis software gives an insight into the health of the rotating machinery. Once the condition is known, the user can have the faults diagnosed. The possible reasons for failure or malfunction are displayed, in order of severity, which can be further evaluated and corrective action planned.

Possible causes of malfunction could include unbalance, permanent bow, misalignment, rotor crack, oil whirl, oil whip, gear tooth failure, looseness and bearing damage.

Physical & Environmental

<table>
<thead>
<tr>
<th>Dimension</th>
<th>317 X 114 X 208 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>5 Kg (11 lb)</td>
</tr>
<tr>
<td>Power supply</td>
<td>24VDC</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-0° to 65° C</td>
</tr>
<tr>
<td>Humidity</td>
<td>10 to 85 % non-condensing</td>
</tr>
</tbody>
</table>

Typical Layout

[Diagram of VibAssist Rack with connections to customer LAN, Vibration analysis server/PC, VibTrans-R, and FM VibTrans-II/standalone monitor]